

CASE REPORT

Transient Ischaemic Attack in Pregnancy: Case Report

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ABSTRACT

Aim and background: The incidence of stroke in pregnancy is 10–34 per 100000 deliveries. In 15% of cases, stroke is preceded by a transient ischaemic attack (TIA). Prevention of stroke, appropriate fetal monitoring, and timely delivery can lead to successful maternal and neonatal outcomes.

Case description: We present a case, where a mother was treated for TIA and the fetal Doppler was repeated every 72 hours to look for reflection of cerebral vascular events in the placental vasculature. Doppler enabled timely delivery resulting in successful maternal and neonatal outcomes.

Conclusion: A 26-year-old, low-risk primigravida with 31 weeks pregnancy was referred with a history of sudden onset heaviness in her head, tingling and numbness, inability to lift left upper limb, and difficulty in speaking for 30 minutes. Magnetic resonance imaging (MRI) was suggestive of linear acute infarcts in sub-cortical white matter in the right superior frontal lobe and parietal lobe. Dopplers were repeated every 72 hours. Stroke was prevented by a therapeutic dose of Low molecular weight-heparin (LMWH) daily. Decision to deliver was guided by derangement in fetal Doppler when Cerebro placental ratio deranged to less than one, leading to a successful maternal and neonatal outcomes.

Keywords: Low molecular weight-heparin, Neurological symptoms, Pregnancy, Stroke in pregnancy, Transient Ischaemic Attack.

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INTRODUCTION

A stroke in pregnancy is a rare neurological emergency. Incidence is 10–34 per 100000 deliveries and very few cases are reported from India.¹ Stroke can lead to maternal morbidity, mortality, and adverse fetal outcomes.² In 15% of cases, stroke is preceded by a transient ischaemic attack (TIA).³ Prevention of stroke, appropriate fetal monitoring, and timely delivery lead to successful maternal and neonatal outcomes.

We present a case, where a mother was treated for TIA and the fetal doppler was repeated every 72 hours to look for reflection of cerebral vascular events in the placental vasculature. Doppler enabled timely delivery resulting in successful maternal and neonatal outcomes.

CASE SUMMARY

A 26-year-old, low-risk primigravida with 31 weeks pregnancy was referred with a history of sudden onset heaviness in her head, tingling and numbness, inability to lift left upper limb, and difficulty in speaking for 30 minutes. No history of convulsions or vomiting.

On examination, hemodynamically stable and normotensive. No neurological deficit. Clinically symphysiofundal height corresponding to 28 weeks, small for gestational age (SGA).

Liver function test (LFTs), renal function test (RFT) normal, coagulation profile normal, anti-Ro antibodies positive.

Magnetic resonance imaging suggestive of linear acute infarcts in sub-cortical white matter in the right superior frontal lobe (Fig. 1). No thrombosis or hemorrhage (Figs 2 and 3). Magnetic Resonance Imaging neck angiography was normal (Fig. 4). The 2D echo was normal.

USG suggestive of SGA with dopplers suggestive of UAPI >95th% ile, MCA PI <5th% ile. Cerebroplacental ratio (CPR) >1.

Low molecular weight-heparin (LMWH) and aspirin started. Prophylactic antenatal steroids were given. Daily non stress

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test (NST) was done. The multidisciplinary team involved the obstetrician, fetal medicine consultant, physician, radiologist, haematologist and neonatologist.

Subsequent fetal dopplers after 72 hours showed improvement in MCAPI and UAPI to normal levels. Therefore, the current management was continued. After 72 hours, there was a derangement in doppler suggestive of UAPI > 95th% ile, MCAPI <5th% ile, and CPR <1. The decision to deliver was taken after the administration of prophylactic MgSO₄ for neuroprotection.

Planned LSCS was done, preterm SGA 1.2 kg delivered, baby cried immediately. The five minute appearance pulse grimace activity respiration (APGAR) was 8/10. Baby admitted to neonatal intensive care unit (NICU) i/v/o prematurity. Minimal respiratory

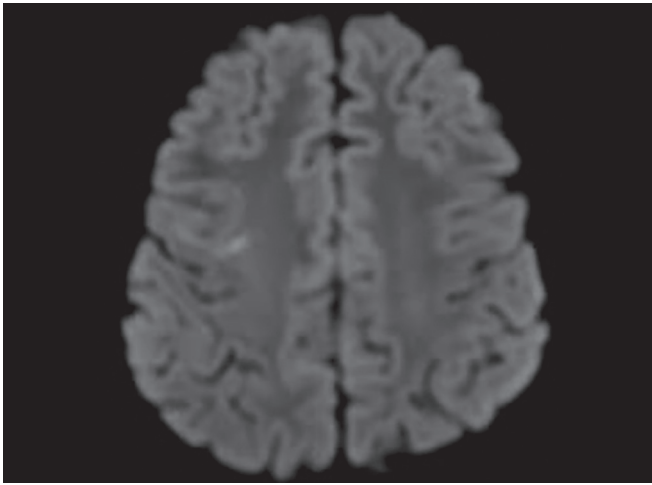


Fig. 1: Axial diffusion images showing small acute infarct in right superior frontal lobe

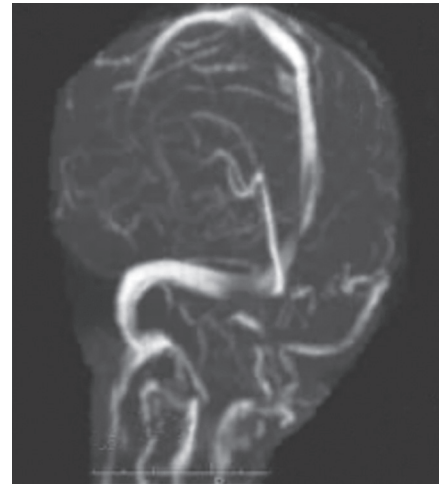


Fig. 3: MR venography reveals no dural sinus thrombosis

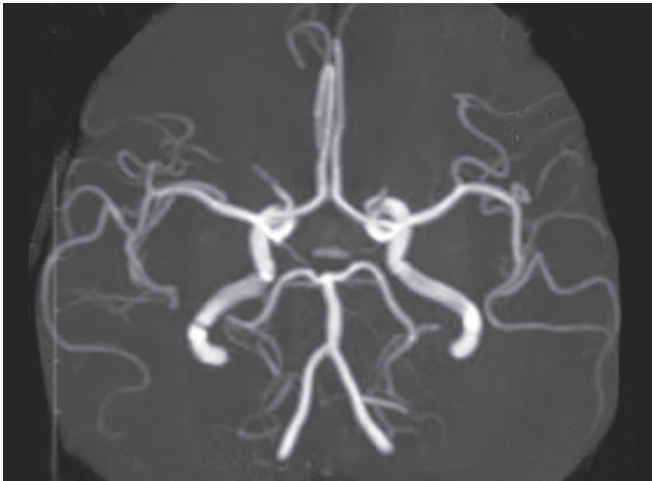


Fig. 2: 3D TOF MR Brain angiography appears normal



Fig. 4: MR neck angiography is normal

support was required in NICU. There was also no reported neurological morbidity at 11 months of age.

Low molecular weight-heparin was given until the mother was 6 weeks postpartum. Anti phospholipid antibody syndrome (APLA) screen after 6 weeks was normal.

DISCUSSION

Stroke can lead to serious maternal morbidity, mortality, and adverse neonatal outcomes. Transient ischaemic attack precedes stroke in 15% of cases.³ Literature includes thrombosis, hemorrhage, and arterial spasm as etiology for stroke. Pre-eclampsia, eclampsia, and hypercoagulability are also known risk factors. The risk is greater in the third trimester and postpartum.⁴

Appropriate management by a multidisciplinary team with anticoagulants, antithrombotics, antihypertensives, and prevention of stroke should be the aim of treatment.⁵ Guidelines for fetal monitoring are not clear in the case of TIA. In our case serial Dopplers every 72 hours aided the timely delivery decision.

Timely delivery can lead to successful neonatal outcomes.

CONCLUSION

Transient ischaemic attack should be managed effectively to prevent stroke. Further research is required in this area to aid guidance about fetal monitoring.

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